

NOTES AND ABSTRACTS

*Professor Édouard Brückner, 1862-1927*¹

We regret to learn of the death of Prof. Édouard Brückner, on May 21 at the age of 64 years. Professor Brückner is well known to all meteorologists from the weather cycle of about 35 years which bears his name, and which is probably the best-founded of all meteorological periodicities. It is stated that he discovered this cycle in 1887; apparently it was known several centuries before, for it is mentioned by Sir Francis Bacon, but until Brückner published in 1890 his noteworthy compilation "Klimaschwankungen seit 1700" it had never been scientifically demonstrated. Among his other meteorological publications may be mentioned his "Berichten über den Fortschritt der geographischen Meteorologie" (1891, 1894, 1899); "Einfluss der Schneedecke auf das Klima der Alpen" (1893) and "Klimaschwankungen 1813-1912 in Vorderindien" (1918).

É. Brückner was born at Jena on July 29, 1862, his father being Alexander Brückner the historian, which perhaps accounts for his able treatment of historical sources in "Klimaschwankungen." He received the degree of Ph. D. at Munich in 1885, and from 1886 to 1888 he was assistant editor of the *Meteorologische Zeitschrift*. His work was not mainly meteorological, however, for in 1891 he became professor of geography at Bern, and in 1906 professor of geography at Vienna, which post he held until his death, and he did a great deal to explore the boundary science of geology and meteorology which is known as paleoclimatology. He collaborated with A. Penck in studying the Quaternary history of the Alps, a fortunate association which produced "Die Alpen in Eiszeitalter," three large volumes published between 1901 and 1909 providing at once the first sure proof of the succession of glacial advances and retreats, a nomenclature which is firmly rooted in the literature of glaciology, and a model of painstaking exploration, critical comparison and lucid exposition.

CAUSES OF TROPICAL RAINFALL

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The rainfall of the Sudan, both west and east, has been found to fluctuate considerably from year to year, not infrequently to such an extent that deficiency or irregularity leads to famine.

In discussing the causes for this in a paper in *Matériaux pour l'étude des calamités* (No. 11, 1926), G. T. Renner maintained that all tropical rainfall is really monsoonal in character. During the period of high sun, the land masses are centers of low pressure surrounded on sea and land by areas of higher pressure. Monsoonal currents blowing from the sea into these areas of low pressure bring heavy rainfall. The alternate cooling of the tropical lands, when the sun is low, leads to a high pressure and a dry season. The double rainy season of equatorial regions is caused by those areas being crossed by both sets of monsoonal currents. Thus variations in the rainfall of the Sudan are due to variations in the intensity of the low pressure and the resultant strength of the monsoon currents. Variation in solar weather must cause the variation in the intensity of the low pressure.

Mr. Renner further points out that while all tropical rainfall is liable to vary from year to year, it is only in the savanna and grassland regions, where normal rain-

fall makes agriculture possible, that a marked deficiency leads to famine conditions. He thus considers that all the tropical savannas and grasslands are potential famine areas.

THE WEATHER AT BRUSSELS (UCCLE) DURING THE MONTHS OF APRIL AND MAY, 1927²

By E. VANDERLINGEN

April.—During almost all of the first half of April, Europe lay under the influence of low pressure, which appeared at the close of March and later extended over the greater part of the continent; barometric minima were noted in our region on the 2d and 10th. The anticyclone that afterward overspread the southern half of the continent until about the 22d began to invade Europe after the 12th and the region of low pressure was pushed back toward the north. Following the retreat of the anticyclonic belt toward the south the region of low pressure began to spread in the same direction after the 22d, the center remaining generally over Scandinavia or the Baltic Sea, or then in that vicinity. This barometric situation gave us as the predominating condition light to moderate winds from points between southwest and northwest; these were often cool and rarely warm, as the component was northerly or southerly.

Excepting the period from the 18th to the 22d, which was fine and warm (means of maxima and minima 18.5° C. and 6.3° C., normals 14.2° C. and 4.3° C., respectively), the temperature generally presented only slight departures, positive and negative, from the normal; colder weather prevailed after the 24th. For the month the mean maximum was 14.0° C. and the mean minimum 4.7° C. (normals 13.7° C. and 3.9° C., respectively). The highest temperature, 19.7° C., occurred on the 19th and again on the 21st, the lowest temperature, -0.5° C., was recorded on the 27th, the only day in the month with freezing temperature. White frosts were frequent; on the night of the 26th-27th the grass thermometer at Uccle registered -8° C.

The total duration of sunshine was 130 hours (normal 165 hours). The total precipitation was 67 mm. (normal 58 mm.) distributed over 18 days with appreciable amount; in the first half of the month the precipitation was 49 mm. on 13 rainy days.

May.—An area of barometric depression, not very deep, extending from the British Isles to the Mediterranean Sea, remained over western Europe during almost all of the first decade of May. This period was warm with light, variable winds. The high pressure that overlay Russia at the same time began to recede toward the east after the 8th, and a depression from the north spread over the north of that country, while an anticyclone, also from the north, advanced over western Europe. From the 11th to the 13th the barometric maximum remained in the vicinity of Iceland or of the British Isles. From the 15th to the 19th a barometric minimum moved from Iceland over Russia while an anticyclonic area, oriented northwest-southeast partially covered western Europe. This high pressure remained until about the 26th and later moved northward. In the last two decades the winds were from northwest to northeast; they were generally cold and dry. This condition was changed only toward the close of the month, when a rather uniform area of barometric depression advanced over the western

¹ Reprinted from *Meteorological Magazine*, June, 1927, p. 118.

² *Ciel et Terre*. June, 1927. Brussels.